Answers by the Veterinarian

Wisconsin College of Agriculture

Knocked-Down Hip

WE HAVE a good 3-year-old mare and she VV has a knocked-down hip, as it is called. She fell on the ice two winters ago and for a long time went lame; but now she is all right only her left hip is much steeper than the other one. This is noticed easily when you stand behind her. I want to breed from this mare, as she is a good one, being part coach. Shire and Belgian. Would it be safe to breed from her?-J. R. N., Dakota.

Reply—In all probabilities it would not be safe to have this mare bred, as the injury points to a fracture of the shaft of the illium (pelvic) and very likely has left a distortion of the pelvic ring. If that is so the mare might not be able to have the foal. Before having her bred have a veterinarian make a and if he finds that the pelvis has not been distorted by the accident, then she may be bred. The breeding of this mare suggests that it would be well to decide upon a ra-tional method of grading up horses. Nothing is to be gained by mixing breeds in the way indicated by the breeding of this marre. If a Belgian was the sire, by all means breed her to a Belgian, if she is fit to breed from; and should a filly result, use a Belgian stal-lion for her and her female progeny when these come of age to be bred. Five successive top crosses of a given pure breed persisted in year after year results in pracaically pure blood in the progeny. Six top crosses only leave 1.5 per cent of impure blood in the graded-up animal.

Barley for Horses

Do you consider barley good feed for horses and colts? If so, how would you ad-vise feeding it—ground, soaked or whole and dry ?-L. J. B., Greeley, Iowa.

Reply-On the Pacific coast barley is large-ly fed to horses in the form of barley hay, and when horses are accustomed to the feed from weaning time and practically get no other grain they seem to stand it well enough. Apart from such use of barley, this grain has not proved a successful food as a sole grain ration for work horses or other horses. It tends to cause skin eruptions and irritations. It is indigestible, and in that ranks third, rye being second and wheat first in ration of indigestibility for horses. It may form a sixth part of the grain ration with cats, bran and corn and should be rolled to burst the outer skin, which is hard. Ground barley makes a paste and sticks to the teeth and gums when fed to horses. For plumping up a horse, boiled or steamed barley is popular with some stallioners and for quickly fattening a horse; but steamed and boiled feeds are much less used now compared with the old-time practice, and it is well that the practice has largely died out. Slop, mashes, steamed and boiled feeds are unnatural, unnecessary and detrimental to every horse and the fertile cause of indigestion and colic. We would much prefer to sell barley in Iowa and feed oats, corn, bran and good mixed hay.

Where Farmers Receive Instruction

own selfish benefits, that of our fami-lies, the community in which we live and the country in which we live, depend very much upon our education. The matter of education includes our physical as well as intellectual development. We often look upon education as the sum of our accumulated knowledge, no matter whether gathered from our own observations and experiences, or from what we gather from the experiences

The fact I wish to impress is concerning the advantages that come from being benefited by the experiences of others. If we accumulate facts only as fast as we can gather them by our own experiences we make progress very slowly and the sum of all that we can accumulate during an ordinary lifetime would not be much. If we gather all the facts we can from others then the sum of our knowledge is limited only by our capabilities to retain what has been accompanied. pabilities to retain what we have seen, heard and read.

The business of farming at the present time requires a well-educated individual, including physical and intellectual education. There was a time when brawn counted for as much or more than brains at farming,

but at the present time farming is coming to be ranked among the learned professions.

To grasp all that is needed requires a trained mind that can take in, comprehend and utilize a large number of important facts. In fact, the business is drawing from a large number of the sciences; therefore the farmer of today in over to teach the sciences. of to-day, in order to keep up to or near his greatest possibilities, must be a scientific

One need not leave the farm to go to college to collect many of the important facts that can and will be a great help in his business. There are very many sources from which one can collect and store up in mind for practical use valuable information bearing on the various branches of the business of farming.

There are opportunities for gathering much while in social intercourse with friends and neighbor farmers. The different phases of the business are sure to come up when of the business meet and engage in conversation in a social way. The methods of performing the kinds of work at hand at that particular season of the year, the best and most profitable crops to raise, the different varieties able crops to raise, the different varieties and the different phases and particulars pertaining to it are sure to be talked over when they meet. Of course the general news and the different phases are particular pertaining to it are sure to be talked over when they meet. breeds and characteristics of the stock that is suited to the needs of the neighborhood and which will yield the greatest incomeall of these things and many more are sub-jects that come up in general conversation and can be made a source of benefit by interchanging of ideas.

In neighborhood social gatherings where farmers' families meet for social pleasure in the evening during the fall and winter there are opportunities to gather much. People are sure to talk about the matters in which they are interested in an informal By N. A. Clapp



Showing the Best the Country Produces

Scene at a farmers' club and grange fair recently held at Wixon, Mich., where farmers from far and wide gathered to discuss problems of farming and to enjoy

way, and perhaps unconsciously they give an opportunity for development and improve-out hints of great value to others and gather ment in several ways. The meetings are in much that adds to the things they are generally held once a month in some capa-

they meet. Of course the general news and to be helpful, some politics will come in for a share of practical lines. consideration, but the farm and the various. The question matters in connection with it arise for general discussion.

The meetings of the farmers' organizations at regular intervals, usually called farmers' clubs, are excellent opportunities to gather practical information. Formerly the club consisted of men only, but in later years it has become the custom for both men and women to attend and take part in the meet- tions

sure to put in practice in their business. clous farmhouse or in a hall. There is first
People engaged in other business drop the social hour in which one meets his acqualitances and makes new ones; the dinner hour, which also adds to the social enjoyment, and then the programme is taken up and carried out during the afternoon. The papers, talks on set topics, all are designed to be helpful, as they generally follow along

> The question box often brings out some lively discussions. I have known of men going many miles to attend a club meeting to get a query answered. Some one in the meeting is pretty likely to be able to impart the desired information. The farming com-munity that is without a good, live farmers' club is lacking in one of the best means of exchanging ideas in regard to farm opera-

me. It is an organization closely joined by bonds of fellowship, love and fidelity, and is a great motive power that stimulates and moves farmers to aspire to and attain greater efficiency in their special business, farming.

The grange usually meets twice a month in the evening, and the scope of the work is such that benefits are derived in social, in intellectual and in a business way. A good live grange in a community is a pretty good assurance that the members are not only learners, but that they are becoming more efficient in the practical duties of life on the

As the grange meetings are held often and are continued throughout the whole year, it can be, and is, one of the greatest and best chools out of school that have as yet been brought into practical operation.

The farmers' institutes are deserving of uch credit, and yet their possibilities of carrying information to the farmers are very limited. The institution comes only once a year, and at longest is only held two or three days. The most of the institutes are held but one day. The time given is only suf-ficient to awaken an interest in some one or two phases of farm operations and arouse the farmers themselves to an appreciation of the nobility, dignity and importance of the profession in which they are engaged.

I have often wished that the scope of the farmers' institute could be extended so as to take in and render more assistance to those who are in the habit of attending, and also to extend the benefits to a greater number. For some time it looked as though the farmers themselves failed to appreciate the efforts that were being made in their behalf, but from my own experience the last few years I am free to say that a large class of farmers are looking on the work with a good deal of appreciation.

They seem to look upon this one or two days farmers' school as an institution that is deserving of the highest praise. During last winter one of the serious difficulties that last winter one of the serious difficulties that confronted the managers was to find a meet-ing place large enough to accommodate all who desired to attend. One solution of the problem is to hold a greater number of institutes, and not undertake to extend the scope over a large radius of country.

Each and every farmer should consider that the institute is designed for his benefit and capable of helping him. The doors are open and all are bid a cordial welcome to come and enjoy what is given and impart their share toward the sum of the good and useful things that can be gathered there. It the addresses do not cover all that each de-sires to know, the question box is a medium through which the information sought can be

To fail to attend the institute is to neglect one of the greatest opportunities of the year. The farm, the soil, the stock, the grains, the vegetables, the fruits and all that pertains to them are legitimate subjects The grange, as a builder of intelligence about which questions can be asked and a farming community, is too well known fair and rational answer expected.

Questions of the Feed Lot Frofessor Herbert W. Mumford

Ground Ear and Shelled Corn Alike

EXPECT to feed some cattle on grass this summer and would like to ask which is preferable, ground ear corn or ground shelled corn. Do you think it would be advisable to supplement the corn with bran or oats? The cattle will have access to clover, timothy and blue grass pasture, I would also like to know what would be the value of barley hulls for fattening cattle. If they have any value, would you recommend them for dry feeding or for feeding on grass? I have been having barley ground for slop for hogs, but do not like the hulls in it for that purpose, and I thought if they would be of any value as feed for other stock I would try to sift them out."

There is but little difference in the gains made by cattle fed ground ear corn and ground shelled corn, and the choice of these methods of preparing corn should depend upon which you can do most cheaply. Soaked shelled corn is especially well adapted to shelled corn is especially well adapted to grazing cattle and many feeders find it a more economical ration than cornmeal. So long as cattle will eat broken ear corn in sufficient quantities without getting sore mouths, it is quite as satisfactory as ground corn. I would not advise supplementing the corn with bran or oats on the kind of par are you mention, as the clover and other grasses will furnish all the protein necessary and at less cost. Barley bulls have very little feed.

will turnish all the protein necessary and at less cost. Barley hulls have very little feeding value for feeding cattle, and I do not think you could afford to sift them from your barley meal for this purpose. We have made no analysis of barley hulls, but as oat hulls have been shown to be similar to wheat straw in composition, it may be assumed that harley hulls have about the seasoned that barley hulls have about the same feed value.

"I wish to ask you a lot of questions in "I wish to ask you a lot of questions in fregard to cottonseed meal. I am sure that it would do the cattle we are feeding in pasture much good and possibly my dry-fed Blacks. I have an offer that looks pretty low to me and think of getting a carload, which I can get laid down here at \$30 per ton, and I guess a dollar or two less. How does which I can get taid down here at sav per ton, and I guess a dollar or two less. How does that compare with corn at 60 cents per bushel? The steers on grass have plenty of grass and twenty pounds of shelled corn a day. and twenty pounds of shelled corn a day. The dry-fed steers, twenty-seven of them, eat ten bushels, one-fifth oilmeal and fourfifths ground shelled corn, per day, with clover hay for roughage. How much cottonseed meal can I feed profitably at above fig-ures with perfect safety to hogs that follow cattle? Had the meal better be fine or pea size? The dry-fed cattle ate twelve bushels a day till the weather got so hot."

Cottonseed meal is especially valuable as a supplement to corn when cattle are on full feed on pasture. With corn at 60 cents per bushel and cottonseed meal at \$30 per ton I would recommend the use of three pounds of cottonseed meal per day per 1,000 pounds live weight of cattle, and certainly think that it would be economy to use it, besides getting a smoother and quicker finish on the cattle. There will be no difficulty in permitting hogs to follow the cattle receiving the amount of cottonseed meal stated, providing reasonable care is used in not giving the hogs access to the meal directly

SUBJECTS

N HELPFUL

Alfalfa Can Be Saved

GROWER in southern Kansas who harvests about 1,000 tons of alfalfa per year, says F. D. Coburn in his "Book of Alfalfa," and is working with it nearly every day from the second week in May until Nov, 10, insists that alfalfa, under the same conditions of rainfall, is much easier to save in

loss of leaves, and cured thus, after being wet, the natural color is better preserved. That alfalfa hay has a higher feeding value than almost any other, even when saved under the most unfavorable circumstances, should be impressed upon the inexperienced.

ook over the matter carefully they could see now they might make a great saving by cur-

ing their meats for family use on the farm.

To illustrate what I wish to say I will give figures to show what some of the meats are sold for and at what prices they are bought back. A beef animal must be a bought back. A beef animal must be a pretty good one to bring 5 cents per pound on foot. After it is slaughtered, calculating for the expense of killing, we will say that the carches is worth 10 cents per pound. If you buy any of the meat back to-day you will pay 18 to 20 cents per pound for medium and chean cuts. Can one afford to do dium and cheap cuts. Can one afford to do business that way?

If one were to sell a whole hog and then If one were to sell a whole hog and then buy back from the butcher at retail prices the hams and shoulders, he would pay more for them than he could get for the whole hog. He would throw away for the trouble of butchering all the side meat, jowl pieces, ribs, lard, liver, heart and trimmings. Can one afford to do it?

one afford to do 11?

If two or three neighbors should conclude that they want some beef during spring and summer they could kill a beef animal and divide it among themselves. The meat can be cut into chunks, put in a tub and soaked in cold water from twelve to twenty-four hours to take out the blood. Then, take a wash boiler and put onto the stove and put in it as much water as will cover the meat after it has been packed in a barrel. For

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fair feeding condition than red clover. He finds the side-delivery rake especially excellent for turning over the green or wet windrows to the sun and air with the least.

Curing Family Meats on the Farm

THERE is a practice quite prevalent among saleratus and two quarts of molasses. Stir farmers to sell all their animals from the frequently and bring to a boil. Just before farm on foot and buy dressed meat of all kinds at retailers' prices, thereby making that rises. Pack the meat in a barrel and their meat bills one of the heavy items of expense on the farm. I think if they would weighted down in the brine. Meat pickled in this manner will keep until used. It is

ready at home at all times. By a little effort the meat needed on the farm during the spring and summer can be put down at home, and will cost much less than if one relies on the butcher. Then the convenience of having it at home when needed is worth considering.

Keep All the Nitrogen

NITROGEN is in many respects the most important of all the plant-food ele ments. It is not found in large quantities in rocky soils, but it is in soils where decaying matter is buried. The farmer should, there fore, plow his cornstalks or stubble and not set it afire and allow it to ascend to open world and float in the air. I have found that the best corn grows where a large quantity of weeds or some other product has been turned and allowed to decay. Clover is a very good crop to bring back the nitroger eause there are small insects continually ating and causing the roots to decay people migrated westward they found the soil very rich and strong, and some believed that it would never wear out. They found, however, that the soil became weak with the vinced that soil will wear out in time.

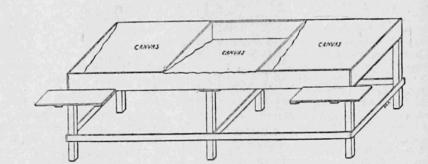
BINDERS IMPORTANT

Corn Best For Silage

PROBABLY the best single crop for silage is corn, as probably no crop will yield the feed per acre that corn will. However, it combined with cow peas or soy beans the feeding value of the silage is greatly increased. When corn is fully tasseled it contains less than one-fourth the amount of dry matter as when ears are fully glazed. In order to get the greatest feeding value and in order that the silage may keep well, corn should not be cut until kernels are well glazed and hard. If corn is allowed to be-

come too ripe the silage does not settle well and the air will not be sufficiently excluded to prevent spoiling. Corn is most easily hanled by cutting with a corn binder. If silage to keep well the leaves and heavier parts ust be thoroughly mixed and evenly distributed in the silo and well tamped, espe-cially next to the wall. After filling, the upper few inches should be wet once and the whole surface tamped every day for a week to obtain a thin, compact layer of well-rotted slage which will exclude the air. The cost of filling the silo will vary from 40 cents to 70 cents per ton, depending upon the management of the work.

Sorting Table For Packing Fruit



This table can easily be made from the drawing from any light material and is adapted to picking and sorting of peaches, apples or potatoes.

Shallow Wells Unsafe

IFE is contained in some form of seed, named L germs in case of disease, and spores in other forms of bacteria. Disease is supposed to lurk in shallow wells, and many who have not made a study of germ life be lieve that because a well is shallow and open at the top disease is always present therein. Such is not the case. A well not tightly closed at the surface and insufficiently deep to contain any but surface water is likely to be contaminated through pollution on the surface soil. As long as germs of dis-case are not actually carried to the well the water is safe. But who can tell? The transportation of germs so small the naked eye is unable to detect them is done in a thousand different ways. Dust blown from the street or from the sickroom laden with germs easily finds its way through the cracks in the covering of an open well. Rains collect the bacteria and wash them through the brick walls of the well. Flies, birds, milk palls washed with water from and close to the well and other agents too numerous to mention help to disseminate disease. The only safe supply of water is a deep drilled well which penetrates the rock layers many feet below the surface of the ground. It is free from disease germs, as all life has been removed by percolation of water through many feet of sand and clay. A shallow, brick-lined well is decidedly unsafe, not alone due to the fact that it is a container of surface water, but because it can be easily con-taminated with disease germs and the substances on which germs feed-organic mat-ter, decomposing vegetable and animal sub-

On the main floor are two driveways and two double ways for hay and grain. While this barn was built on a Tennessee farm of 1,400 acres, it is well adapted, with modifications, to smaller farms.

A Well-Designed Barn

This barn is 40x120 feet, with an eight-foot basement and twenty-foot superstructure. In the basement are seven horse stalls, three large box stalls, eighteen cow stalls, an open stable for young cattle, a large sheep stable. Under one approach is a cistern

and under the other a root cellar, while two silos are placed between the approaches.

O F THE large retinue of mechanical serfs at the command of the American farmer to-day the self-binder is, perhaps, the mos mportant. Its place could not be filled by score of men with cradles and rakes, and, if properly managed, it has greater efficiency and is much more subservient to the master's will than the human slave of old. Since the early history of the binder the necessity for great efficiency and capacity has steadily increased. Not only is the cost of labor greater, but the new soil formed at that time produced a strong, healthy straw that stood up well when ripe and a delay in harvesting was not so serious. At present, on account of the ravages of rust and other diseases, the straw often breaks badly even before the grain is ripe, so that the profit of a crop is often dependent upon the dispatch with which it is harvested.

Notwithstanding the fact that the success of an entire year's work may depend upon the binder the neglect and abuse to which it is subjected by a large number of farmers is proverbial. It is not uncommon to see a binder stored away in the corner of the field where it was last used, or in some exposed part of the yard, with the twine box full of expensive pure manilla twine and the reel hoisted as high as possible, as if it were de-sirable to have it thoroughly exposed to the breeze. By the time it is to be used again the master wheel will probably have sunk deep into the soil, while the pole and neck yoke are allowed to rest on the ground. Na-

By R. M. Dolve, Agricultural College, Fargo, N. D.

evidence of his neglect by a luxuriant crop of

Under these conditions it is small wonder that the average life of a binder is short. While the farmer complacently measures its life in years, its real usefulness may be counted in days. A binder is used on the average not much more than two weeks a year and lasts about five years, which gives it a period of usefulness of approximately in to 100 days. That this time could be definitely increased by better care and management, and that neglect and mismanage nent result in short-lived machin proper work and large expenses for repairs Considering the high price of binders, to-

gether with their comparatively short life and the short time they are used each year, few better investments can be made by a farmer than that of providing adequate shel-

Before binders are put away after a season's work they should be gone over with season's work they should be gone over with the same care that a good engineer would be-stow on his engine. All old grease and dirt should be removed from the surface as well as from the bearings. This can be done with kerosene and waste. The binder should be carefully offed and all bright parts greased

ture, as if ashamed of the deplorable shift-lessness of its copartner, will often hide the overhaul a binder for next year. At this time overhaul a binder for next year. At this time the operator knows, or should know, all the defects of the machine and what it needs in the line of extras and repairs to refit it for next season's work. If the machine is put away, on the other hand, without being giver a second thought until needed again, the op-erator, if he still remains on the place, will have forgotten what the machine most need-ed. The result is that the binder is perhaps given a hasty inspection, which in a majority of cases falls to reveal anything, and brought out into the field with numerous small de ects that could have been repaired at a nom-nal expenditure of time and money. If the farmer is too busy to attend to repairs im-mediately after the season's work is com-pleted, he should at least find time to do the next best thing, which is to make a thorough note of all defects of the machine with a view remedying them when time is more plenti-

Binders are often operated by inexperlced or careless persons who, knowing noth-g about the machine they are using, sit renely in t'seat and do nothing but drive. stow on his engine. All old grease and dirt should be removed from the surface as well as from the bearings. This can be done with kerosene and waste. The binder should be familiar with and under-kerosene and waste. The binder should be carefully oiled and all bright parts greased to prevent rusting. After the season's work be able to make all necessary adjustments binder, for in North Dakota nearly one of the entire value of our crop is into in farm machinery. If through better and management the average life of our machines could be increased by a single at tremendous saving would be effected.

and repairs without the aid of an expert. He must know where to oil, when to oil, and how to oil. Many a good binder has been prema-turely relegated to the scrap pile because of improper oiling. The man who gives his binder are oil both who are strictly improper oiling. The man who gives his binder an oil bath when starting and then fails to oil again until it fairly screams for more may succeed in using a great deal of oil, but his binder will soon wear out. All oil that does not get into the bearings does more harm than good, as it serves to gather dust and grit, which will work into the bearings. The proper way to oil is to use a little at a time and often. All parts of a binder do not need the same amount of oil, and the opera-tor should decide which parts, by virtue of their work, need the most, and give them fre-quent oiling, while other parts require only occasional applications

Co-operation among farmers for the purpose of securing an equitable price for their products is one way of making farming pay and is to be encouraged. But, since the profit from farming is the difference between the selling price and the cost of production, an equally efficient way of securing the desired equally entered to reduce the cost of production. A great reduction can be effected by better care and management of such machines as the binder, for in North Dakota nearly one-fift of the entire value of our crop is invested in farm machinery. If through better care and management the average life of our farm machines could be increased by a single year

Clubs For Young People

FOR several years we have been telling farmers' club in every community and get-ting together to talk over and discuss matters pertaining to the farm and farming operations. In some places the seed has fallen on good ground, sprung up and yielded abundantly. In many places it did not even take root to flourish for a season.

With the new movement in introducing agriculture in the schools there are signs of much good coming from it. The young people are organizing agricultural clubs for the purpose of getting together and discussing matters pertaining to the farm. Such club can benefit those who attend

regularly in many ways. It will tend to give an accurate estimate of farming as a profession in comparison with other of the learned professions. It will aid each member in gathering and putting in practice much sclentific information. It will tend to improve social conditions in the country. one thing has been the cause of discontent in the country as has the lack of social advan-tages, and we can properly welcome a movement that will gratify the social longings of the younger classes of people who live in the

They have been in the past a subject for jokes on account of being "country green-horns," letting moss grow on their backs and carrying hayseed in their hair, but now the countryside place is the "popular retreat" for the refined and cultured who seek to get away from the noise and bustle of the city. And such are to be a part of society hereafter in the country. Let the conduct progress. in the country. Let the good work progress,